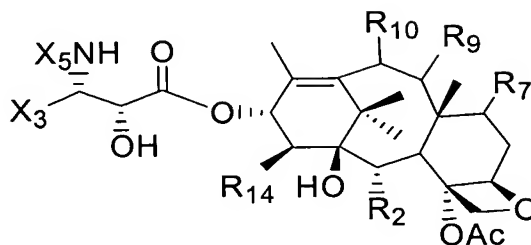


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Claims

1. A taxane having the formula



$R_2$  is acyloxy;

$R_7$  is hydroxy;

$R_9$  is keto, hydroxy, or acyloxy;

$R_{10}$  is  $R_{10a}COO-$ ;

$R_{10a}$  is hydrocarbyl, substituted hydrocarbyl, or heterocyclo wherein said hydrocarbyl or substituted hydrocarbyl contains carbon atoms in the alpha and beta positions relative to the carbon atom of which  $R_{10a}$  is a substituent;

$R_{14}$  is hydrido or hydroxy;

$X_3$  is heterocyclo or substituted or unsubstituted alkyl, alkenyl, or alkynyl, wherein alkyl comprises at least two carbon atoms;

$X_5$  is  $-COX_{10}$ ,  $-COOX_{10}$ , or  $-CONHX_{10}$ ;

$X_{10}$  is hydrocarbyl, substituted hydrocarbyl, or heterocyclo; and

Ac is acetyl.

2. The taxane of claim 1 wherein  $R_{10a}$  is substituted or unsubstituted  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl or  $C_2 - C_8$  alkynyl.

3. The taxane of claim 2 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

4. The taxane of claim 2 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

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5. The taxane of claim 2 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.
6. The taxane of claim 2 wherein  $R_{14}$  is hydrido.
7. The taxane of claim 6 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
8. The taxane of claim 6 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
9. The taxane of claim 6 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.
10. The taxane of claim 2 wherein  $R_2$  is benzoyloxy.
11. The taxane of claim 10 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
12. The taxane of claim 10 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
13. The taxane of claim 10 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.
14. The taxane of claim 2 wherein  $R_{14}$  is hydrido and  $R_9$  is keto.
15. The taxane of claim 14 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

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16. The taxane of claim 14 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.
17. The taxane of claim 14 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.
18. The taxane of claim 2 wherein  $R_2$  is benzoyloxy and  $R_9$  is keto.
19. The taxane of claim 18 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.
20. The taxane of claim 18 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.
21. The taxane of claim 18 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.
22. The taxane of claim 2 wherein  $R_{14}$  is hydrido and  $R_2$  is benzoyloxy.
23. The taxane of claim 22 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.
24. The taxane of claim 22 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.
25. The taxane of claim 22 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

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26. The taxane of claim 2 wherein  $R_{14}$  is hydrido,  $R_9$  is keto, and  $R_2$  is benzoyloxy.

27. The taxane of claim 26 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

28. The taxane of claim 26 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

29. The taxane of claim 26 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

30. The taxane of claim 1 wherein  $R_{10a}$  is  $C_2 - C_8$  alkyl.

31. The taxane of claim 30 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

32. The taxane of claim 30 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

33. The taxane of claim 30 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

34. The taxane of claim 30 wherein  $R_{14}$  is hydrido.

35. The taxane of claim 34 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

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36. The taxane of claim 34 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

37. The taxane of claim 34 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

38. The taxane of claim 30 wherein  $R_2$  is benzoyloxy.

39. The taxane of claim 38 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

40. The taxane of claim 38 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

41. The taxane of claim 38 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

42. The taxane of claim 30 wherein  $R_{14}$  is hydrido and  $R_9$  is keto.

43. The taxane of claim 42 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

44. The taxane of claim 42 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

45. The taxane of claim 42 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

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46. The taxane of claim 30 wherein  $R_2$  is benzoyloxy and  $R_9$  is keto.
47. The taxane of claim 46 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
48. The taxane of claim 46 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
49. The taxane of claim 46 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.
50. The taxane of claim 30 wherein  $R_{14}$  is hydrido and  $R_2$  is benzoyloxy.
51. The taxane of claim 50 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
52. The taxane of claim 50 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
53. The taxane of claim 50 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.
54. The taxane of claim 30 wherein  $R_{14}$  is hydrido,  $R_9$  is keto, and  $R_2$  is benzoyloxy.
55. The taxane of claim 54 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

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56. The taxane of claim 54 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

57. The taxane of claim 54 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

58. The taxane of claim 1 wherein  $R_{10a}$  is ethyl.

59. The taxane of claim 58 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

60. The taxane of claim 58 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

61. The taxane of claim 58 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

62. The taxane of claim 58 wherein  $R_{14}$  is hydrido.

63. The taxane of claim 62 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

64. The taxane of claim 62 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

65. The taxane of claim 62 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

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66. The taxane of claim 58 wherein  $R_2$  is benzoyloxy.
67. The taxane of claim 66 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
68. The taxane of claim 66 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
69. The taxane of claim 66 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.
70. The taxane of claim 58 wherein  $R_{14}$  is hydrido and  $R_9$  is keto.
71. The taxane of claim 70 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
72. The taxane of claim 70 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.
73. The taxane of claim 70 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.
74. The taxane of claim 58 wherein  $R_2$  is benzoyloxy and  $R_9$  is keto.
75. The taxane of claim 74 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.



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76. The taxane of claim 74 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

77. The taxane of claim 74 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

78. The taxane of claim 58 wherein  $R_{14}$  is hydrido and  $R_2$  is benzoyloxy.

79. The taxane of claim 78 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

80. The taxane of claim 78 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

81. The taxane of claim 78 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

82. The taxane of claim 58 wherein  $R_{14}$  is hydrido,  $R_9$  is keto, and  $R_2$  is benzoyloxy.

83. The taxane of claim 82 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

84. The taxane of claim 82 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is substituted or unsubstituted  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

85. The taxane of claim 82 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

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86. The taxane of claim 82 wherein  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

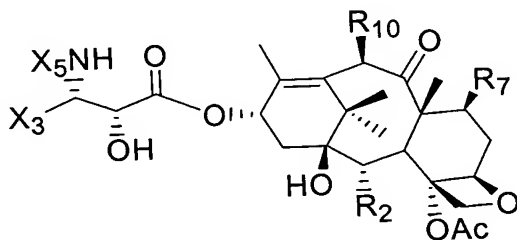
87. The taxane of claim 86 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\text{C}_2 - \text{C}_8$  alkyl,  $\text{C}_2 - \text{C}_8$  alkenyl, or  $\text{C}_2 - \text{C}_8$  alkynyl.

88. The taxane of claim 86 wherein  $X_3$  is 2-furyl.

89. The taxane of claim 86 wherein  $X_3$  is 2-thienyl.

90. The taxane of claim 86 wherein  $X_3$  is cycloalkyl.

91. A taxane having the formula



$R_2$  is benzoyloxy;

$R_7$  is hydroxy;

$R_{10}$  is  $\text{R}_{10a}\text{COO}-$ ;

$X_3$  is substituted or unsubstituted heterocyclo;

$X_5$  is  $-\text{COX}_{10}$ ,  $-\text{COOX}_{10}$ , or  $-\text{CONHX}_{10}$ ;

$X_{10}$  is hydrocarbyl, substituted hydrocarbyl, or heterocyclo; and

$R_{10a}$  is hydrocarbyl, substituted hydrocarbyl, or heterocyclo wherein said hydrocarbyl or substituted hydrocarbyl contains carbon atoms in the alpha and beta positions relative to the carbon of which  $R_{10a}$  is a substituent; and

Ac is acetyl.

92. The taxane of claim 91 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl or 4-pyridyl.

93. The taxane of claim 92 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl,

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4-pyridyl, C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl.

94. The taxane of claim 92 wherein X<sub>5</sub> is -COX<sub>10</sub> and X<sub>10</sub> is phenyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is t-butyl.

95. The taxane of claim 91 wherein X<sub>3</sub> is furyl or thienyl.

96. The taxane of claim 95 wherein X<sub>5</sub> is -COX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl.

97. The taxane of claim 95 wherein X<sub>5</sub> is -COX<sub>10</sub> and X<sub>10</sub> is phenyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is t-butyl.

98. The taxane of claim 91 wherein R<sub>10a</sub> is ethyl or propyl.

99. The taxane of claim 98 wherein X<sub>3</sub> is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl or 4-pyridyl.

100. The taxane of claim 99 wherein X<sub>5</sub> is -COX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl.

101. The taxane of claim 99 wherein X<sub>5</sub> is -COX<sub>10</sub> and X<sub>10</sub> is phenyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is t-butyl.

102. The taxane of claim 98 wherein X<sub>3</sub> is furyl or thienyl.

103. The taxane of claim 102 wherein X<sub>5</sub> is -COX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl, or X<sub>5</sub> is -COOX<sub>10</sub> and X<sub>10</sub> is substituted or unsubstituted C<sub>1</sub> - C<sub>8</sub> alkyl, C<sub>2</sub> - C<sub>8</sub> alkenyl, or C<sub>2</sub> - C<sub>8</sub> alkynyl.

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104. The taxane of claim 91 wherein  $X_3$  is substituted or unsubstituted furyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

105. The taxane of claim 91 wherein  $X_3$  is substituted or unsubstituted thienyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

106. The taxane of claim 91 wherein  $X_3$  is 2-furyl or 2-thienyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

107. The taxane of claim 91 wherein  $X_3$  is 2-furyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

108. The taxane of claim 91 wherein  $X_3$  is 2-thienyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

109. A pharmaceutical composition comprising the taxane of claim 1 and at least one pharmaceutically acceptable carrier.

110. The pharmaceutical composition of claim 109 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

111. The pharmaceutical composition of claim 110 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

112. The pharmaceutical composition of claim 110 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

113. The pharmaceutical composition of claim 109 wherein  $R_{10a}$  is ethyl or propyl.

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114. The pharmaceutical composition of claim 113 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_2 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

115. The pharmaceutical composition of claim 114 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is substituted or unsubstituted phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is substituted or unsubstituted  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

116. The pharmaceutical composition of claim 114 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

117. The pharmaceutical composition of claim 110 wherein  $X_3$  is furyl or thienyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

118. The pharmaceutical composition of claim 110 wherein  $X_3$  is substituted or unsubstituted furyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

119. The pharmaceutical composition of claim 110 wherein  $X_3$  is substituted or unsubstituted thienyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

120. The pharmaceutical composition of claim 110 wherein  $X_3$  is isobutenyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

121. The pharmaceutical composition of claim 110 wherein  $X_3$  is alkyl,  $R_{10a}$  is ethyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

122. The pharmaceutical composition of claim 110 wherein  $X_3$  is 2-furyl or 2-thienyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

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123. The pharmaceutical composition of claim 110 wherein  $X_3$  is 2-furyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

124. The pharmaceutical composition of claim 110 wherein  $X_3$  is 2-thienyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

125. The pharmaceutical composition of claim 110 wherein  $X_3$  is isobutenyl,  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

126. The pharmaceutical composition of claim 110 wherein  $X_3$  is cycloalkyl,  $R_{10a}$  is ethyl,  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

127. A pharmaceutical composition comprising the taxane of claim 91 and at least one pharmaceutically acceptable carrier.

128. A pharmaceutical composition comprising the taxane of claim 95 and at least one pharmaceutically acceptable carrier.

129. A composition for oral administration comprising the taxane of claim 1 and at least one pharmaceutically acceptable carrier.

130. The composition of claim 129 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

131. The composition of claim 130 wherein  $R_{10a}$  is ethyl or propyl.

132. The composition of claim 131 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

133. The composition of claim 131 wherein  $R_{14}$  is hydrogen,  $R_2$  is benzoyloxy, and  $X_5$  is  $-\text{COX}_{10}$  wherein  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  wherein  $X_{10}$  is t-butyl.

134. The composition of claim 133 wherein  $X_3$  is isobutenyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

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135. The composition of claim 133 wherein  $X_3$  is phenyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

136. The composition of claim 133 wherein  $X_3$  is phenyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl.

137. A method of inhibiting tumor growth in mammals, said method comprising orally administering a therapeutically effective amount of a pharmaceutical composition comprising the taxane of claim 1 and at least one pharmaceutically acceptable carrier.

138. The method of claim 137 wherein  $X_3$  is 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $C_1 - C_8$  alkyl,  $C_2 - C_8$  alkenyl, or  $C_2 - C_8$  alkynyl.

139. The method of claim 138 wherein  $R_{10a}$  is ethyl or propyl.

140. The method of claim 139 wherein  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

141. The method of claim 140 wherein  $R_{14}$  is hydrogen and  $R_2$  is benzoyloxy.

142. The method of claim 141 wherein  $X_3$  is isobutenyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

143. The method of claim 141 wherein  $X_3$  is phenyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COOX}_{10}$  and  $X_{10}$  is t-butyl.

144. The method of claim 141 wherein  $X_3$  is furyl or thienyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl.

145. The method of claim 141 wherein  $X_3$  is phenyl;  $R_{10a}$  is ethyl; and  $X_5$  is  $-\text{COX}_{10}$  and  $X_{10}$  is phenyl.

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146. The taxane of claim 1 wherein  $R_{10a}$  is propyl,  $X_3$  is 2-furyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is propyl, trans-propenyl, butenyl, 2-thienyl or 2-furyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is ethyl, isopropyl or isobutyl.

147. The taxane of claim 1 wherein  $R_{10a}$  is propyl,  $X_3$  is 2-thienyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is propyl, trans-propenyl, isobutenyl, butenyl, phenyl, 2-thienyl, 2-furyl or 3-pyridyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is ethyl, isopropyl or isobutyl.

148. The taxane of claim 1 wherein  $R_{10a}$  is propyl,  $X_3$  is 3-furyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is trans-propenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is isobutyl.

149. The taxane of claim 1 wherein  $R_{10a}$  is propyl,  $X_3$  is 3-thienyl, and  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is isobutyl.

150. The taxane of claim 1 wherein  $R_{10a}$  is cyclopropyl,  $X_3$  is 2-furyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is propyl, trans-propenyl, butenyl, phenyl, 2-thienyl or 2-furyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is ethyl, isopropyl, isobutyl or t-butyl.

151. The taxane of claim 1 wherein  $R_{10a}$  is cyclopropyl,  $X_3$  is 2-thienyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is propyl, trans-propenyl, butenyl, isobutenyl, phenyl, 2-thienyl, 2-furyl or 3-pyridyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is ethyl, isopropyl, isobutyl or t-butyl.

152. The taxane of claim 1 wherein  $R_{10a}$  is cyclopropyl,  $X_3$  is 3-furyl or 3-thienyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is trans-propenyl or phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is isobutyl or t-butyl.

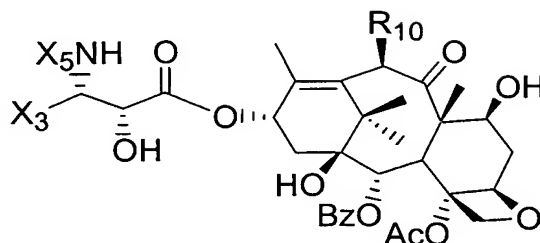
153. The taxane of claim 1 wherein  $R_{10a}$  is cyclopropyl,  $X_3$  is 2-pyridyl or 4-pyridyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is phenyl, or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl.

154. The taxane of claim 1 wherein  $R_{10a}$  is ethyl,  $X_3$  is 2-furyl, and  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-amyl.



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155. A taxane having the formula



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 $R_{10}$  is  $R_{10a}COO^-$ ; $R_{10a}$  is ethyl; $X_3$  is isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyridyl, 3-pyridyl or 4-pyridyl;

10

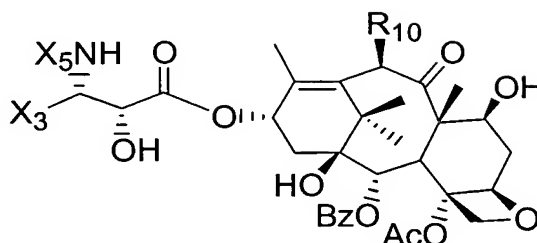
 $X_5$  is  $-COX_{10}$  and  $X_{10}$  is propyl, butenyl, isobutenyl, phenyl, 2-thienyl, 2-furyl, 3-pyridyl or 4-pyridyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is ethyl, isopropyl, isobutyl or t-butyl; and

Ac is acetyl.

156. The taxane of claim 155 wherein  $X_3$  is 2-thienyl, 3-thienyl, 2-furyl or 3-furyl.157. The taxane of claim 155 wherein  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is propyl or phenyl or  $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is isopropyl, isobutyl or t-butyl.158. The taxane of claim 155 wherein  $X_3$  is 2-thienyl.159. The taxane of claim 155 wherein  $X_3$  is 2-furyl.160. The taxane of claim 91 wherein  $R_{10a}$  is ethyl,  $X_3$  is 2-thienyl, 2-furyl or 3-furyl, and  $X_5$  is  $-COX_{10}$  and  $X_{10}$  is trans-propenyl.

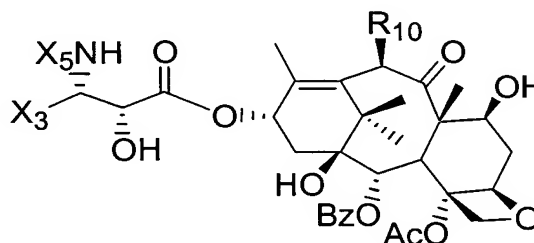
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161. A taxane having the formula

 $R_{10}$  is  $R_{10a}COO-$ ; $R_{10a}$  is propyl; $X_3$  is isopropyl, cyclopropyl, cyclobutyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyridyl, 3-pyridyl or 4-pyridyl; $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl; and

Ac is acetyl.

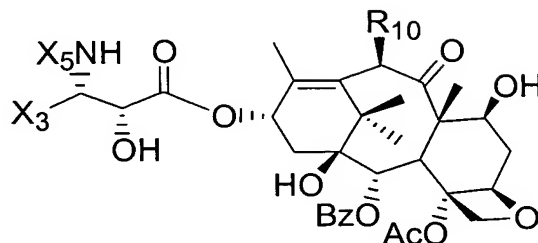
162. A taxane having the formula

 $R_{10}$  is  $R_{10a}COO-$ ; $R_{10a}$  is 2-thienyl or 2-furyl; $X_3$  is isopropyl, cyclobutyl, isobutenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyridyl, 3-pyridyl, 4-pyridyl or p-nitrophenyl; $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl; and

Ac is acetyl.

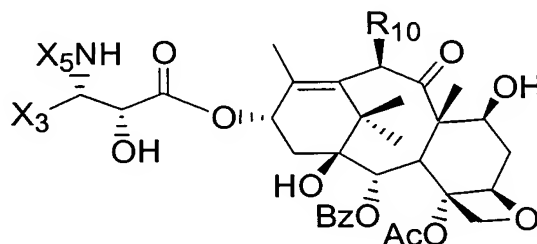
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163. A taxane having the formula:

 $R_{10}$  is  $R_{10a}COO-$ ; $R_{10a}$  is isobutenyl; $X_3$  is isobutenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyridyl or 4-pyridyl; $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl; and

Ac is acetyl.

164. A taxane having the formula

 $R_{10}$  is  $R_{10a}COO-$ ; $R_{10a}$  is isopropyl or trans-propenyl; $X_3$  is isopropyl, cyclobutyl, isobutenyl, 2-thienyl, 3-thienyl, 2-furyl, 3-furyl, 2-pyridyl, 4-pyridyl or p-nitrophenyl; $X_5$  is  $-COOX_{10}$  and  $X_{10}$  is t-butyl; and

Ac is acetyl.